



**(43) International Publication Date**  
**9 June 2005 (09.06.2005)**

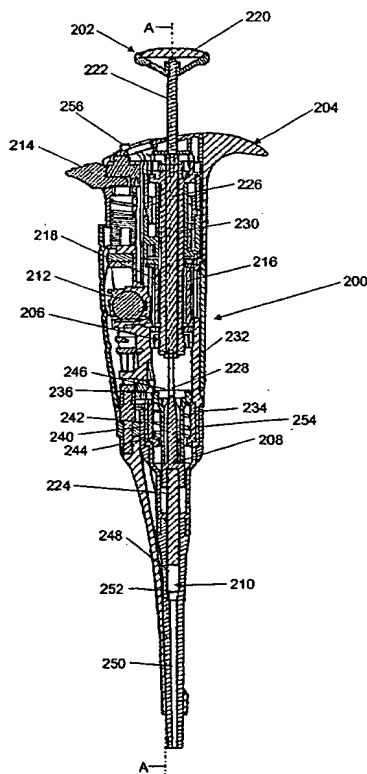
**(10) International Publication Number**  
**WO 2005/051543 A1**

**PCT**

- |   |                                |                               |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
|---|--------------------------------|-------------------------------|----|---------|-------------------------------|----|---------|---------------------------|----|---------|-------------------------------|----|---------|-------------------------------|----|---------|-------------------------------|----|------------|--------------------------------|----|--|
| <p><b>(51) International Patent Classification<sup>7</sup>:</b><br/>G01N 35/10</p> <p><b>(21) International Application Number:</b><br/>PCT/IB2004/003876</p> <p><b>(22) International Filing Date:</b><br/>24 November 2004 (24.11.2004)</p> <p><b>(25) Filing Language:</b><br/>English</p> <p><b>(26) Publication Language:</b><br/>English</p> <p><b>(30) Priority Data:</b></p> <table border="0"> <tr> <td>0313920</td> <td>27 November 2003 (27.11.2003)</td> <td>FR</td> </tr> <tr> <td>0313921</td> <td>27 November 2003 (27.11.2003)</td> <td>FR</td> </tr> <tr> <td>0402433</td> <td>9 March 2004 (09.03.2004)</td> <td>FR</td> </tr> <tr> <td>0409442</td> <td>7 September 2004 (07.09.2004)</td> <td>FR</td> </tr> <tr> <td>0409438</td> <td>7 September 2004 (07.09.2004)</td> <td>FR</td> </tr> <tr> <td>0409443</td> <td>7 September 2004 (07.09.2004)</td> <td>FR</td> </tr> <tr> <td>10/944,532</td> <td>17 September 2004 (17.09.2004)</td> <td>US</td> </tr> </table> | 0313920                        | 27 November 2003 (27.11.2003) | FR | 0313921 | 27 November 2003 (27.11.2003) | FR | 0402433 | 9 March 2004 (09.03.2004) | FR | 0409442 | 7 September 2004 (07.09.2004) | FR | 0409438 | 7 September 2004 (07.09.2004) | FR | 0409443 | 7 September 2004 (07.09.2004) | FR | 10/944,532 | 17 September 2004 (17.09.2004) | US | <p><b>(71) Applicant (for all designated States except US):</b> <b>GILSON S.A.S.</b> [FR/FR]; 19, avenue des Entrepreneurs, BP 145, F-95400 Villiers-le-Bel (FR).</p> <p><b>(72) Inventors; and</b></p> <p><b>(75) Inventors/Applicants (for US only):</b> <b>VIOT, Francois</b> [FR/FR]; 38 rue des Ruelles, F-95430 Auvers sur Oise (FR). <b>MAY, Yves</b> [FR/FR]; 6B rue de la Ceinture, F-78000 Versailles (FR).</p> <p><b>(74) Agent:</b> <b>BELL, Callie, M.;</b> Foley &amp; Lardner LLP, 150 East Gilman Street, Post Office Box 1497, Madison, WI 53701-1497 (US).</p> <p><b>(81) Designated States (unless otherwise indicated, for every kind of national protection available):</b> AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,</p> |
| 0313920   | 27 November 2003 (27.11.2003)  | FR                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
| 0313921   | 27 November 2003 (27.11.2003)  | FR                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
| 0402433   | 9 March 2004 (09.03.2004)      | FR                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
| 0409442   | 7 September 2004 (07.09.2004)  | FR                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
| 0409438   | 7 September 2004 (07.09.2004)  | FR                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
| 0409443   | 7 September 2004 (07.09.2004)  | FR                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |
| 10/944,532  | 17 September 2004 (17.09.2004) | US                            |    |         |                               |    |         |                           |    |         |                               |    |         |                               |    |         |                               |    |            |                                |    |  |

[Continued on next page]

**(54) Title:** SYSTEM AND METHOD FOR PRECISE LIQUID MEASUREMENT IN A LIQUID SAMPLING PIPETTE



**(57) Abstract:** A device and method are provided for correcting a requested volume of liquid to aspirate/dispense by a liquid handling pipette based on the requested volume and/or a physical condition at the pipette. The pipette includes a piston drive mechanism configured to contact a piston assembly and move a piston rod of the piston assembly within a tip holder thereby causing regulation of an amount of liquid in the tip holder. The method includes selecting a requested volume at a pipette, the requested volume representing the amount of liquid to regulate, calculating a correction volume using a volume characterization, wherein the volume characterization characterizes a difference in the amount of the liquid regulated in the tip holder as a function of the requested volume, and displaying the correction volume to a user of the pipette thereby regulating the requested volume of liquid in the tip holder. The volume characterization is determined using a calibration process.



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**(84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*